



Health	1
Flammability	0
Reactivity	0
Personal Protection	B

Trebla  
8417 Chapin Industrial Drive  
St. Louis, MO 63114  
Phone 1-800-325-4404

November 5, 1998

## MATERIAL SAFETY DATA SHEET

### SECTION I - General Information

**Product Name:** Trechrome-3 Color Developer Replenisher, Part A

**Catalog Number:** 20DE231

**Formula:** Aqueous Solution

### SECTION II - Product and Hazardous Ingredients Information

<u>ITEM</u>	<u>CAS #</u>	<u>PERCENT</u>	<u>PEL</u>	<u>SARA</u> <u>RQ / TPQ</u>
Benzyl Alcohol	100-51-6	50-55	50 PPM(c)	N/A N/A
Ethylene Glycol	107-21-1	45-50	N/A	N/A N/A
Water	7732-18-5	N/A	N/A	N/A N/A

### SECTION III - Physical Data

**BOILING POINT:** >212° F

**VAPOR DENSITY (mmHG):** N/A

**SPECIFIC GRAVITY:** 1.08

**PERCENT VOLATILE BY WEIGHT:** ~ 2%

**APPEARANCE AND ODOR:** Amber Color, Benzyl Alcohol odor.

**VAPOR PRESSURE (mmHg):** N/A

**SOLUBILITY IN WATER:** Appreciable

**pH:** ~ 8.2

**EVAPORATION RATE:** N/A

### SECTION IV - Fire and Explosion Hazard Data

**Flash Point:** 232° F (cc)

**Flammable Limits: LEL:** N/A **UEL:** N/A

**Extinguishing Media:** Use alcohol foam, water, CO<sub>2</sub>, dry chemical.

**Special Fire Fighting Procedures:** Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual Fire and Explosions Hazards:** Slight fire hazard when exposed to heat or flame. Can react with oxidizing materials and acids.

### SECTION V - Health Hazard Data

**TLV (ACGIH):** Ethylene Glycol, 100 PPM (TWA)

#### **Effects of Overexposure:**

**Inhalation:** Prolonged or excessive inhalation may result in headache, nausea and irritation of upper respiratory track. Expected to be a low hazard under normal conditions.

**Eyes:** Vapor may cause irritation. Contact will cause irritation.

**Skin:** Repeated and prolonged contact may cause irritation. Benzyl alcohol can be absorbed through skin.

**Ingestion:** Do not take internally. Expected to be moderately toxic. May cause nausea and vomiting.

**NON-CARCINOGENIC:** •**Teratogenicity:** N/A •**Reproductive Toxicity:** N/A •**Mutagenicity:** NA •**Synergistic Products:** N/A

#### **Emergency First Aid Procedures:**

**Eyes:** Flush with large amounts of water for 15 minutes. Seek medical attention.

**Skin:** Wash skin with soap and water. If irritation occurs, seek medical attention.

**Ingestion:** Drink water or milk and induce vomiting. Seek medical attention immediately giving full details of amount ingested and toxicity.

**Inhalation:** Move to fresh air.

## **SECTION VI - Reactivity Data**

**Stability:** Stable.

**Incompatibility:** Oxidizing materials and acids.

**Hazardous Decomposition Products:** None known.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Oxidizing materials and acids.

## **SECTION VII - Spill or Leak Procedure**

**Steps to be taken in case material is released or spilled:** Wear protective clothing as specified in Section VIII. If federal, state and local laws permit, flush to the sewer with large amounts of water.

**Waste Disposal:** If federal, state and/or local laws permit, flush to sewer with large amounts of water. Otherwise dispose of contaminated product and materials used in cleaning up the spill in a manner approved for this material. Consult proper federal, state and/or local regulatory agencies to ascertain proper disposal procedures.

## **SECTION VIII - Special Protection Information**

**Respiratory Protection (Specify Type):** Should not be necessary under normal conditions.

**Ventilation:** Good local mechanical ventilation should be sufficient.

**Protective Equipment:**

**Gloves:** Impervious gloves.

**Eyes:** Wear protective goggles.

**Other:** As necessary to prevent skin contact. Eyewash facilities in vicinity of use.

## **SECTION IX - Special Precautions**

**Precautions to be taken in handling and storage:** Keep away from heat and flame. Do not store near oxidizing materials or acids. Wash thoroughly after use.

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## MATERIAL SAFETY DATA SHEET

### SECTION I - General Information

**Product Name:** Trechrome-3 Color Developer and Replenisher, Part B

**Catalog Number:** 20DE231

**Formula:** Aqueous Solution

### SECTION II - Product and Hazardous Ingredients Information

<u>ITEM</u>	<u>CAS #</u>	<u>PERCENT</u>	<u>PEL</u>	<u>SARA</u> <u>RQ / TPQ</u>
Hydroxylamine Sulfate	10039-54-0	15-20	N/A	N/A N/A
Water	7732-18-5	N/A	N/A	N/A N/A

### SECTION III - Physical Data

**BOILING POINT:** >212° F

**VAPOR DENSITY (mmHG):** ~0.6

**SPECIFIC GRAVITY:** 1.10

**PERCENT VOLATILE BY WEIGHT:** ~ 83 %

**APPEARANCE AND ODOR:** Clear, Colorless, and Odorless.

**VAPOR PRESSURE (mmHg):** ~ 17.0

**SOLUBILITY IN WATER:** Complete

**pH:** ~ 2.2

**EVAPORATION RATE:** N/A

### SECTION IV - Fire and Explosion Hazard Data

**Flash Point:** None

**Flammable Limits: LEL:** N/A **UEL:** N/A

**Extinguishing Media:** Use method appropriate for surrounding fire.

**Special Fire Fighting Procedures:** Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual Fire and Explosions Hazards:** None Known.

### SECTION V - Health Hazard Data

**TLV (ACGIH):** N/A

#### Effects of Overexposure:

**Inhalation:** Prolonged or excessive inhalation may result in headache and nausea. Expected to be a low hazard under normal conditions.

**Eyes:** Vapor may cause irritation. Contact will cause irritation and burns.

**Skin:** Repeated and prolonged contact may cause irritation.

**Ingestion:** Poisonous if swallowed. Do not take internally. May cause nausea or loss of consciousness.

**NON-CARCINOGENIC:** N/A • **Teratogenicity:** N/A • **Reproductive Toxicity:** N/A • **Mutagenicity:** NA •

**Synergistic Products:** N/A

#### Emergency First Aid Procedures:

**Eyes:** Flush with large amounts of water for 15 minutes. Seek medical attention.

**Skin:** Wash skin with soap and water. If irritation occurs, seek medical attention.

**Ingestion:** Drink water or milk and induce vomiting. Seek medical attention immediately giving full details of amount ingested and toxicity.

**Inhalation:** Move to fresh air. Get medical attention if breathing becomes difficult.

## **SECTION VI - Reactivity Data**

**Stability:** Stable.

**Incompatibility:** Strong Alkali.

**Hazardous Decomposition Products:** When heated to decomposition it emits toxic fumes of SO<sub>x</sub>. Sulfuric acid fumes may form in fires.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None Known.

## **SECTION VII - Spill or Leak Procedure**

**Steps to be taken in case material is released or spilled:** Wear protective clothing as specified in Section VIII. Neutralize with sodium bicarbonate. If federal, state and local laws permit, flush to the sewer with large amounts of water.

**Waste Disposal:** Neutralize with sodium bicarbonate. If federal, state and/or local laws permit, flush to sewer with large amounts of water. Otherwise dispose of contaminated product and materials used in cleaning up the spill in a manner approved for this material. Consult proper federal, state and/or local regulatory agencies to ascertain proper disposal procedures.

## **SECTION VIII - Special Protection Information**

**Respiratory Protection (Specify Type):** Should not be necessary under normal conditions.

**Ventilation:** Good local mechanical ventilation should be sufficient.

### **Protective Equipment:**

**Gloves:** Impervious gloves.

**Eyes:** Wear protective goggles.

**Other:** As necessary to prevent skin contact. Eyewash facilities in vicinity of use.

## **SECTION IX - Special Precautions**

**Precautions to be taken in handling and storage:** Do not store near strong alkali. Wash thoroughly after use.

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## MATERIAL SAFETY DATA SHEET

### SECTION I - General Information

**Product Name:** Trechrome-3 Color Developer and Replenisher, Part C

**Catalog Number:** 20DE231

**Formula:** Aqueous Solution

### SECTION II - Product and Hazardous Ingredients Information

<u>ITEM</u>	<u>CAS #</u>	<u>PERCENT</u>	<u>PEL</u>	<u>SARA</u> <u>RQ / TPQ</u>
4-(N-Ethyl-N-2-methanesulfonylaminoethyl)-2-methylphenylenediamine sesquisulfate monohydrate	25646-71-3	25-30	N/A	N/A N/A
Sulfuric acid	7664-93-9	<1	1 mg/m <sup>3</sup> (TWA)	1000# /1000#

### SECTION III - Physical Data

**BOILING POINT:** >212° F

**VAPOR DENSITY (mmHG):** ~0.6

**SPECIFIC GRAVITY:** 1.13

**PERCENT VOLATILE BY WEIGHT:** ~ 69%

**APPEARANCE AND ODOR:** Clear, amber solution, sulfur dioxide odor.

**VAPOR PRESSURE (mmHg):** ~ 17.0

**SOLUBILITY IN WATER:** Complete

**pH:** ~ 1.1

**EVAPORATION RATE:** N/A

### SECTION IV - Fire and Explosion Hazard Data

**Flash Point:** None

**Flammable Limits: LEL:** N/A **UEL:** N/A

**Extinguishing Media:** Use method appropriate for surrounding fire.

**Special Fire Fighting Procedures:** Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual Fire and Explosions Hazards:** None Known.

### SECTION V - Health Hazard Data

**TLV (ACGIH):** Sulfuric acid - 1 mg/m<sup>3</sup>(TWA), Sulfur Dioxide - 2 PPM (TWA)

#### Effects of Overexposure:

**Inhalation:** Vapor may cause irritation to nose and throat. May cause difficulty in breathing.

**Eyes:** Vapor causes irritation. Contact can cause severe burns.

**Skin:** Repeated and prolonged contact may cause irritation or allergic skin reaction.

**Ingestion:** Harmful if swallowed. Will cause severe burns in upper digestive track.

**NON-CARCINOGENIC:** • **Teratogenicity:** N/A • **Reproductive Toxicity:** N/A • **Mutagenicity:** NA • **Synergistic Products:** N/A

#### **Emergency First Aid Procedures:**

**Eyes:** Flush with large amounts of water for 15 minutes. Seek medical attention immediately.

**Skin:** Wash skin with soap and water. If irritation occurs, seek medical attention.

**Ingestion:** If conscious, drink water or milk. **DO NOT induce vomiting.** Seek medical attention immediately, giving full details of amount ingested and toxicity.

**Inhalation:** Move to fresh air. Get medical attention if breathing becomes difficult.

## **SECTION VI - Reactivity Data**

**Stability:** Stable.

**Incompatibility:** Mineral acids and strong alkalis.

**Hazardous Decomposition Products:** When heated to decomposition it emits toxic fumes of SO<sub>x</sub>. Contact with strong acids will release SO<sub>2</sub>.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Do not store near mineral acids and strong alkalis.

## **SECTION VII - Spill or Leak Procedure**

**Steps to be taken in case material is released or spilled:** Wear protective clothing as specified in Section VIII. Neutralize with sodium bicarbonate. If federal, state and local laws permit, flush to the sewer with large amounts of water.

**Waste Disposal:** If federal, state and/or local laws permit, flush to sewer with large amounts of water. Otherwise dispose of contaminated product and materials used in cleaning up the spill in a manner approved for this material. Consult proper federal, state and/or local regulatory agencies to ascertain proper disposal procedures.

## **SECTION VIII - Special Protection Information**

**Respiratory Protection (Specify Type):** An approved organic vapor respirator is necessary when exposed to vapors.

**Ventilation:** Good local mechanical ventilation should be sufficient.

### **Protective Equipment:**

**Gloves:** Impervious gloves.

**Eyes:** Wear protective goggles.

**Other:** As necessary to prevent skin contact. Eyewash facilities in vicinity of use.

## **SECTION IX - Special Precautions**

**Precautions to be taken in handling and storage:** Do not store near mineral acids and strong alkalis. Do not store above 100° F. After use, wash hands with a non-alkaline hand cleaner.

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## MATERIAL SAFETY DATA SHEET

### SECTION I - General Information

**Product Name:** Trechrome-3 Color Developer and Replenisher, Part D

**Catalog Number:** 20DE231

**Formula:** Aqueous Solution

### SECTION II - Product and Hazardous Ingredients Information

<u>ITEM</u>	<u>CAS #</u>	<u>PERCENT</u>	<u>SARA</u> <u>PEL</u>	<u>RQ / TPQ</u>
Potassium Carbonate	584-08-7	40-45	N/A	N/A N/A
Potassium Hydroxide	1310-58-3	5-10	N/A	N/A N/A
Potassium Sulfite	10117-38-1	1-5	N/A	N/A N/A
Water	7732-18-5	N/A	N/A	N/A N/A

### SECTION III - Physical Data

**BOILING POINT:** >212° F

**VAPOR DENSITY (mmHG):** ~0.6

**SPECIFIC GRAVITY:** 1.49

**PERCENT VOLATILE BY WEIGHT:** ~ 56%

**APPEARANCE AND ODOR:** Clear, colorless, and odorless.

**VAPOR PRESSURE (mmHg):** ~ 17.0

**SOLUBILITY IN WATER:** Complete

**pH:** ~ 10.45

**EVAPORATION RATE:** N/A

### SECTION IV - Fire and Explosion Hazard Data

**Flash Point:** None

**Flammable Limits: LEL:** N/A **UEL:** N/A

**Extinguishing Media:** Use method appropriate for surrounding fire.

**Special Fire Fighting Procedures:** Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual Fire and Explosions Hazards:** None Known.

### SECTION V - Health Hazard Data

**TLV (ACGIH):** Potassium Hydroxide - 2mg/m<sup>3</sup>(TWA).

#### **Effects of Overexposure:**

**Inhalation:** Vapor may cause irritation to nose and throat. May cause difficulty in breathing.

**Eyes:** Vapor causes irritation. Contact can cause severe burns.

**Skin:** Repeated and prolonged contact may cause irritation or allergic skin reaction.

**Ingestion:** Harmful if swallowed. May cause nausea and loss of consciousness.

**NON-CARCINOGENIC:** • **Teratogenicity:** N/A • **Reproductive Toxicity:** N/A • **Mutagenicity:** NA • **Synergistic Products:** N/A

#### **Emergency First Aid Procedures:**

**Eyes:** Flush with large amounts of water for 15 minutes. Seek medical attention immediately.

**Skin:** Wash skin with soap and water. If irritation occurs, seek medical attention.

**Ingestion:** If conscious, drink water or milk. **DO NOT induce vomiting.** Seek medical attention immediately, giving full details of amount ingested and toxicity.

**Inhalation:** Move to fresh air. Get medical attention if breathing becomes difficult.

## **SECTION VI - Reactivity Data**

**Stability:** Stable.

**Incompatibility:** Strong acids.

**Hazardous Decomposition Products:** When heated to decomposition it emits CO<sub>2</sub>. Contact with strong acids will create heat and release SO<sub>2</sub>.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Do not store near strong acids.

## **SECTION VII - Spill or Leak Procedure**

**Steps to be taken in case material is released or spilled:** Wear protective clothing as specified in Section VIII. Neutralize with sodium bicarbonate. If federal, state and local laws permit, flush to the sewer with large amounts of water.

**Waste Disposal:** Neutralize with sodium bicarbonate. If federal, state and/or local laws permit, flush to sewer with large amounts of water. Otherwise dispose of contaminated product and materials used in cleaning up the spill in a manner approved for this material. Consult proper federal, state and/or local regulatory agencies to ascertain proper disposal procedures.

## **SECTION VIII - Special Protection Information**

**Respiratory Protection (Specify Type):** An approved organic vapor respirator is necessary when exposed to vapors.

**Ventilation:** Good local mechanical ventilation should be sufficient.

### **Protective Equipment:**

**Gloves:** Impervious gloves.

**Eyes:** Wear protective goggles.

**Other:** As necessary to prevent skin contact. Eyewash facilities in vicinity of use.

## **SECTION IX - Special Precautions**

**Precautions to be taken in handling and storage:** Do not store near strong acids. Do not store above 100° F. Wash thoroughly after use.

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